This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

As rescanning documents *will not* correct images, please do not report the images to the Image Problem Mailbox.

PATENT ABSTRACTS OF JAPAN

(11)Publication number : **11-073459**
(43)Date of publication of application : **16.03.1999**

---

(51)Int.Cl. **G06F 17/60**

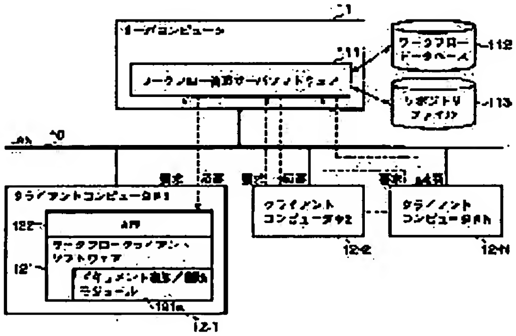
G06F 3/14

---

(21)Application number : **09-235123** (71)Applicant : **TOSHIBA CORP**
(22)Date of filing : **29.08.1997** (72)Inventor : **INABA HIROSHI**

---

(54) WORK FLOW MANAGEMENT SYSTEM AND METHOD FOR OPERATING DOCUMENT MANAGEMENT


1
サーバコンピュータ
11
ワークフロー管理サーバソフトウェア
ワークフローデータベース
112
リポジトリファイル
113
LAN
10
要求
応答
要求
応答
要求
応答
クライアントコンピュータ#1
122
AP
ワークフロークライアントソフトウェア
121
ドキュメント追加/削除モジュール
121a
12-1
クライアントコンピュータ#2
12-2
クライアントコンピュータ#N
12-N

(57)Abstract:
PROBLEM TO BE SOLVED: To efficiently execute document management operation on the client side by using a graphical user interface for managing connection between a task to be a unit of work flow working and a document to be worked.

SOLUTION: A document adding/deleting module 121a is included in work flow client software 121 and a document adding operation picture including two windows, i.e., a task table window and an added document table window, is displayed by the module 121a. Task structure and connecting relation with a document are also displayed on the task table window in addition to a task table. When a user selects a document and a task to be mutually connected on the document adding operation picture, connection between the document and task is automatically executed.

CLAIMS

[Claim(s)]

[Claim 1] The workflow managerial system characterized by providing the following. The task chart showing the list of each tasks for carrying out a series of work required for operating processing in the workflow managerial system which uses a computer network and supports a series of work flows required for operating processing, and delivery of information required for the work A means to display the operation screen containing the document chart showing the list of the documents managed with the aforementioned workflow managerial system The connecting means which connects the task in the aforementioned task chart, and the document in the aforementioned document chart according to the operation on this operation screen

[Claim 2] The workflow managerial system according to claim 1 characterized by providing further a means to reflect the result of connecting between the task in the aforementioned task chart, and the document in the aforementioned document chart on the aforementioned task chart so that the document connected to the task may be matched and displayed on the task to which the front Naka corresponds by the aforementioned connecting means on the aforementioned task chart.

[Claim 3] The aforementioned connecting means is a workflow managerial system according to claim 1 characterized by providing a means to judge whether the subtask which inherits the attribute is contained in the task specified as a connecting place of a document by the operation on the aforementioned operation screen, and the means which connects the same document to each of the subtask when the subtask is contained.

[Claim 4] For a means to be realized as an object of an object-oriented model and to display the aforementioned operation screen, each task for carrying out a series of work required for operating processing is a workflow managerial system according to claim 1 characterized by displaying each aforementioned task by the tree structure on the aforementioned task chart according to the dependency between two or more task objects.

[Claim 5] The workflow managerial system which is characterized by providing the following and which uses a computer network and supports a series of work flows required for operating processing, and delivery of a document required for the work A flow definition means to define connecting on a document required for processing of each task for carrying out a series of work required for operating processing, and the task of these each The task chart showing the list of each tasks belonging to the predetermined flow defined by this flow definition means A means to display the operation screen containing the document chart showing the list of the documents managed with the aforementioned workflow managerial system The means which adds and connects the document in the aforementioned document chart to the task in the aforementioned task chart according to the operation on this operation screen

[Claim 6] In the workflow managerial system which uses a computer network and supports a series of work flows required for operating processing, and delivery of a document required for the work Each task for carrying out a series of work required for operating processing is realized as an object of an object-oriented model. The workflow managerial system characterized by providing a means to display the relation of connection to the hierarchical relationship of the task of these each, and a document into the task chart showing the list of each aforementioned tasks.

[Claim 7] The document overhead operation method which is characterized by providing the following and which uses a computer network and is used with the workflow managerial system which supports a series of work flows required for operating processing, and delivery of a document required for the work The task chart showing the list of each tasks for carrying out a series of work required for operating processing The document chart showing the list of the documents managed with the aforementioned workflow managerial system

[Claim 8] The document overhead operation method according to claim 7 characterized by reflecting the result of connecting between the task in the aforementioned task chart, and the document in the aforementioned document chart on the aforementioned task chart so that the document connected to the task may be matched and displayed on the task to which the front Naka corresponds by the aforementioned connecting processing on the aforementioned task chart.

[Claim 9] The document overhead operation method according to claim 7 characterized by connecting the same document to each of the subtask when it judges whether the subtask which inherits the attribute is contained in the task specified as a connecting place of a document by the operation on the aforementioned operation screen when performing the aforementioned connecting processing and the subtask is contained.

[Claim 10] Each task for carrying out a series of work required for operating processing is the document overhead operation method according to claim 7 characterized by realizing as an object of an object-oriented model and displaying each aforementioned task by the tree structure on the aforementioned task chart according to the dependency between two or more task objects.

[Claim 11] The record medium with which the computer program which is characterized by providing the following, and which uses a computer network and is used with the workflow managerial system which supports a series of work flows required for operating processing and delivery of a document required for the work was recorded The aforementioned computer program is the task chart showing the list of each tasks for carrying out a series of work required for operating processing. The procedure which displays the operation screen containing the document chart showing the list of the documents managed with the aforementioned workflow managerial system The procedure for performing connecting processing with the task in the aforementioned task chart, and the document in the aforementioned document chart according to the operation on this operation screen

[Claim 12] The aforementioned computer program is a record medium according to claim 11 characterized by providing further the procedure which reflects the result of connecting between the task in the aforementioned task chart, and the document in the aforementioned document chart on the aforementioned task chart so that the document connected to the task may be matched and displayed on the task to which the front Naka corresponds by the aforementioned connecting processing on the aforementioned task chart.

[Claim 13] The aforementioned computer program is a record medium according to claim 11 characterized by including the procedure of judging whether the subtask which inherits the attribute being contained in the task specified as a connecting place of a document by the operation on the aforementioned operation screen when performing the aforementioned connecting processing, and the procedure which connects the same document to each of the subtask when the subtask is contained.

[Claim 14] Each task for carrying out a series of work required for operating processing is a record medium according to claim 11 which is realized as an object of an object-oriented model and is characterized by the aforementioned computer program including the procedure which displays each aforementioned task by the tree structure on the aforementioned task chart according to the dependency between two or more task objects.

DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[The technical field to which invention belongs] this invention relates to the document overhead operation method used by client-server [which supports a series of work flows required for operating processing, and delivery of information required for the work] type a workflow managerial system and this system.

[0002]

[Description of the Prior Art] In recent years, in office, the place of business, etc., introduction of the groupware of doing informational exchange and an informational share between individuals and into a group is advanced using the computer network. it becomes possible to boil the productivity of a group or an individual markedly and to raise it by use of this groupware

[0003] There is a workflow managerial system in typical groupware. By automating a series of work flows required for operating processing, and delivery of information required for the work, this workflow managerial system supports execution of business, and is realized as client-server type software. In this case, each work (task) required for operating processing and informational (document) management to deliver are performed by the server, and actual work, i.e., task processing, is done by distributing in each client.

[0004] In the server, the connection with a task and a document, the relation between a task and its person in charge, etc. are managed according to the flow definition created by the client. The task information included in the flow definition created at once can be diverted as a template, and it becomes possible to perform customize of a flow etc. easily by using it.

[0005]

[Problem(s) to be Solved by the Invention] However, in the conventional workflow managerial system, it was difficult not to offer the effective structure for carrying out overhead operation of the connection with the task used as the unit of workflow work, and the document which is a work object, but to perform efficiently document overhead operation, such as connecting work and a check of a connection state, by the client side.

[0006] It aims at offering the workflow managerial system which can perform efficiently document overhead operation, such as connecting work and a check of a connection state, by the client side, and the document overhead operation method by using the graphical user interface (GUI) for carrying out overhead operation of the connection with the task which this invention is made in view of such a point, and serves as a unit of workflow work, and the document which is a work object.

[0007]

[Means for Solving the Problem] In the workflow managerial system which uses a computer network and supports a series of work flows required for operating processing, and delivery of information required for the work in order that this invention may solve an above-mentioned technical problem The task chart showing the list of each tasks for carrying out a series of work required for operating processing, A means to display the operation screen containing the document chart showing the list of the documents managed with the aforementioned workflow managerial system, The connecting means which connects the task in the aforementioned task chart and the document in the aforementioned document chart according to the operation on this operation screen is established.

[0008] In this workflow managerial system, a client is provided with an operation screen including the both sides of a task chart and a document chart, and if a user connects on the operation screen and a target document and a target task are chosen, connecting to these documents and a task will be performed automatically. Thus, when it can be made to perform the epilogue attachment work of a document and a task on the same screen, the increase in efficiency of connecting work can be attained. Therefore, by, displaying the task list used as a template on a task chart for example, and displaying the list of the documents chosen as the document chart by reference processing etc., it becomes possible to add a document to the task of a template easily, and a flow can be efficiently customized now.

[0009] Moreover, it is desirable to provide further a means to reflect the result of connecting between the task in the aforementioned task chart and the document in the aforementioned document chart on the aforementioned task chart so that the document connected to the task may be matched and displayed on the task to which the front Naka corresponds by the aforementioned connecting means on the aforementioned task chart. This becomes possible to check the connection state of a task and a document more easily.

[0010] Furthermore, it is desirable by using the property of succession of an object-oriented model to make it reflect the connection state of the document to a task also in the subtask. This is realizable by establishing further a means to judge whether the subtask which inherits the attribute is contained in the task specified as a connecting place of a document by the operation on the aforementioned operation screen, and the means which connects the same document to each of the subtask when the subtask is contained.

[0011] Moreover, it is more desirable to display simultaneously not only a task list but the relation of connection to the hierarchical relationship of a task, each task, and a document into a task chart. This becomes possible to check the information about two or more things at once with one chart.

[0012]

[Embodiments of the Invention] Hereafter, the operation gestalt of this invention is explained with reference to a drawing. The composition of the workflow managerial system concerning 1 operation gestalt of this invention is shown in drawing 1 . A computer network is used for this workflow managerial system. It is for automating delivery of information, such as a document required for a series of work flow required for operating processing, and its work, and supporting execution of business. The workflow management server software 111 performed on the server computer 11, It realizes from each client computer 12-1 connected to the server computer 11 through LAN10, 12-2, --, the workflow client software 121 performed on 12-N, respectively.

[0013] It performs management of the progress situation of each task processing etc. while the workflow management server software 111 offers the task information which shows the work content to the workflow client software 121 corresponding to each person in charge person according to the operating advance procedure defined as a workflow, or control of a work screen and program execution required for each task processing is performed and it performs offer of a document etc.

[0014] Management the task by the workflow management server software 111, a document, a person in charge, and correspondence-related [between them] is performed using the management information accumulated at the workflow database 112. Thereby, while between two or more documents and a person in charge relates and is managed for every flow definition, management of the connection with the task which is the work unit of each workflow, and a document required for the task processing is performed. In this case, each task which constitutes a flow is realized as an object of an object-oriented model, and the relation between tasks is defined by the dependency between objects.

[0015] Moreover, the substance of information, such as a document, is stored in the RIPOJITO refile 113, and the client which is read from this RIPOJITO refile 113 and corresponds is provided with the document sent to a client according to work advance.

[0016] A client computer 12-1, 12-2, --, the workflow client software 121 performed on 12-N, respectively It is what performs definition of a workflow, execution of the task processing specified for the task information acquired from the workflow management server software 111, etc. For this workflow client software 121 Various functions including the above-mentioned flow definition and task processing, such as a task list display and a flow display, are offered by API (Application Program Interface)122 offered by the workflow management server software 111.

[0017] Each task receives a certain document, referring to it, creates a new document and is created according to the information flow of passing the next person in charge. If a task list display function is started, the task information which shows the task among the tasks assigned to the person's in charge 121, i.e., workflow client software, user which can be processed will be acquired from the workflow management server software 111, and a list indication of it will be given on a task list screen. On this task list screen, a user's selection of the task of a processing object provides the workflow client software 121 with program execution environment, a document, etc. required for the task processing from the workflow management server software 111.

[0018] Moreover, starting of a flow definition function displays the flow definition screen for doing flow definition work. On this screen, the existing flow definition managed by the workflow management server software 111 can be called, the template of each task included in it can be carried out at the time of creating a new flow definition, and it can be used. In this flow definition processing, the document managed by the workflow management server software 111 to the task can be added and deleted. Addition and deletion of this document are performed by document addition / deletion module 121a included in the workflow client software 121.

[0019] That is, document addition / deletion module 121a is prepared in order [of a task and a document] to connect and to enable it to do work efficiently using a graphical user interface, and it displays a work screen including the chart of the task included in the flow definition called on the task definition screen, and the list of the documents managed by the workflow management server software 111. Into a task chart, not only a task list but the relation of connection to the hierarchical relationship of a task, each task, and a document is displayed simultaneously. If a user connects on an operation screen and a target document and a target task are chosen, connecting to these documents and a task will be performed by document addition / deletion module 121a.

[0020] In this connecting processing, the connection state of the document to a task is reflected also in the subtask which inherits the attribute by using the property of succession of an object-oriented model. Therefore, when a document is connected to an originating task, the document is automatically tied up also to each subtask. The result which attaching connects is reflected also in the display of a task chart while being reflected in the workflow management server software 111.

[0021] Next, with reference to drawing 2 , the task function manager by the workflow management server software 111 is explained. The workflow management server software 111 consists of the task Management Department 201 which performs management of a task etc. according to a workflow definition, and the document Management Department 202 which manages documents, such as a text required for the processing, a figure, and a picture, for every task, and is. Task management by the task Management Department 201 is performed using task management information 112a in the workflow database 112.

[0022] Like illustration, while Task ID and Document ID match and are managed as the definition information for every flow definition by this task management information 112a, the subtask information which shows the dependency between tasks as attribute information on each task ID is managed by it. The task ID of the subtask is registered into the subtask information on a task with a subtask.

[0023] If there is a flow definition call demand from the workflow client software 121, the task Management Department 201 will search the definition information on the flow which corresponds based on the flow name included in the call demand from task management information 112a, and will return the reference result for the workflow client software 121 as a response to an inquiry.

[0024] Moreover, if there is an updating demand of the connection relation between a task and a document from the workflow client software 121, the task Management Department 201 will update the flow definition information which corresponds according to the connection relation information included in the updating demand.

[0025] In addition, since each task is realized as an object containing procedure and data as mentioned above, the object ID for discriminating an object is used as a task ID.

[0026] Next, with reference to drawing 3 , the functional composition of the workflow client software 121 is explained. Task processing module 121d for processing task list display module 121c for displaying flow definition module 121b which becomes the call origin of this document addition / purge function, and a task list screen in addition to the above-mentioned document addition / deletion module 121a, and the task chosen on the task list screen etc. is included in the workflow client software 121.

[0027] These modules 121a-121d perform communication with the workflow management server software 111 using above-mentioned API122. Moreover, these modules 121a-121d cooperate with GUI(Graphical User Interface)121e, and offer the required information to a receptionist and user of the operator guidance from a user. An each modules [121a-121d] function is performed by receiving a prompting message from API122 or GUI121e.

[0028] The example of the flow definition screen displayed by flow definition module 121b is shown in drawing 4 . Drawing 4 (a) is the initial screen of the flow definition screen immediately after flow definition module 121b starting, and consists of a tool bar, a status bar, and a menu bar. If the flow definition which should be carried out the "file" refernce of a menu bar is called, the window 1 which shows the flow definition will be displayed as shown in drawing 4 (b). Here, the example to which the flow definition about a certain job which consists of "TASK1" ->"TASK2" -> "TASK3" was called is shown. Moreover, the sign "+" added to "TASK2" means that the task contains a subtask.

[0029] If a document additional function is chosen from the "document" of the menu bar of drawing 4 (b), document addition / deletion module 121a will be called, and the document add-operation screen of drawing 5 will be displayed by this.

[0030] The addition place task list window which shows the list of addition place tasks, and the document list window which shows the list of documents are displayed on a document add-operation screen as shown in drawing 5 .

[0031] The list of the tasks belonging to the flow definition called on the flow definition screen is displayed on an addition place task list window. Here, the case where the flow definition whose originating task has the layered structure that the subtask is "Charge A", the "costs check A", "Charge B", and the "costs check A" by "all the tasks in a template" is called is shown. This layered structure is displayed using tree form like illustration.

[0032] The list of the documents which serve as an additional candidate is displayed on the document list window in the document managed by the workflow management server software 111. An additional candidate's document is searched according to the reference conditions inputted into the reference condition field.

[0033] The document and addition place task which a user should add from a document list window and an addition place task list window, respectively are chosen, and if the connecting button of the ">" sign among these windows is operated, connecting of these documents and a task will be performed. In drawing 5 , two documents, "transportation-expenses claim form" and a "payment report", are chosen from a document list window, and the case where the task "paid and processed" is chosen as an addition place task is shown from the addition place task list window. In this case, two documents, "transportation-expenses claim form" and a "payment report", are connected to the task "paid and processed", and a user is shown the result of the connecting by connecting and displaying two documents, "transportation-expenses claim form" and a "payment report", on the bottom of the task in an addition place task list window "paid and processed" like illustration. Thereby, in an addition place task list window, besides the information of a task list and its task structure, an additional indication will be given and the information of connection of a document and a task becomes possible [checking two or more information at once from one chart].

[0034] Moreover, by drawing 6 , a document "a costs chart" is chosen from a document list window, "all the tasks in a template" which is originating tasks is chosen from an addition place task list window, and the state where those connecting was performed is shown. In this case, a document "a costs chart" is tied up to all subtasks like illustration. Thus, by performing connecting processing with a task and a document using the dependency of a task, it becomes possible to complete the connecting work which needed to be done for each subtask of every only by one work to an originating task.

[0035] Next, with reference to drawing 7 or drawing 10 , the procedure of the document addition processing by document addition / deletion module 121a is explained. The flow chart of drawing 7 shows the flow of the whole document addition processing.

[0036] That is, if execution of a document additional function is chosen from on a flow definition screen by the user, document addition / deletion module 121a will be started, and the document add-operation screen explained by drawing 5 will be displayed first (Step S101). In this case, the list of the tasks belonging to the flow definition called on the flow definition screen is displayed on the addition place task list window of a document add-operation screen.

[0037] Subsequently, reference processing of a document is performed by the document reference conditions specified by the user on the document add-operation screen (Step S102). This document reference processing publishes the reference demand including the specified reference conditions for the server software 111 from the client software 121, and is performed by searching the list information on a document that the server software 111 agrees on the reference condition, and answering the client software 121. The document list information acquired from the server software 111 is displayed on a document list window (Step S103).

[0038] Subsequently, connecting of a document and a task is performed according to the operation of a user performed on a document add-operation screen (Step S104). The detail of this document-task connecting processing is shown in drawing 8 .

[0039] In document-task connecting processing, the document ID of the document chosen from the document list window is acquired first (Step S201), and the object ID of the addition place task subsequently chosen from the addition place task list window is acquired as shown in the flow chart of drawing 8 (Step S202).

[0040] Next, selection of the task which should actually tie up a document based on the object ID of a task is performed (Step S203). In this task selection processing, the subtask information about the task specified as an addition place task is acquired from the server software 111 by the user, and the layered structure of a task is investigated based on the subtask information. And about a task without a subtask, connecting processing of a document is performed as it is, and connecting processing of a document is performed to all these subtasks about a task with a subtask.

[0041] In this case, considering the actual task structure in an object-oriented model, it is only the task object of a least-significant layer that the substance of a procedure required for task processing is included, and there is no substance of procedure in a task object with a subtask. Therefore, what is necessary is just to perform connecting processing of the document to a task to the task object of a least-significant layer in fact.

<DP N=0007> [0042] For example, if the task structure of three hierarchies like drawing 9 is assumed, it is "the subtask 1", "the subtask 2" and the "grandchild task 1" which are shown with an illustration slash, and the "grandchild task 2" that the substance of a procedure required for task processing is included, and the substance of procedure is not included in a "originating task" and "a subtask 3." That is, procedure assigned to the "originating task" is distributed and performed in the procedure of "a subtask 1", "a subtask 2", and "a subtask 3", and it distributes for the procedure of the "grandchild task 1" and the "grandchild task 2" which are the subtask, and procedure of "a subtask 3" is performed. Therefore, what is necessary is just to connect the document to "a subtask 1", "a subtask 2", the "grandchild task 1", and the "grandchild task 2" including the substance of procedure, when a "originating task" is specified by the user as an addition place of a document. An example of the procedure of the task selection processing such for connecting is shown in drawing 10 .

[0043] That is, it is investigated whether a subtask exists in the task first based on the subtask information about the task specified by the user as an addition place task (Step S301). When it exists, reference of each [these] subtask is performed (Step S302), and the judgment of whether a subtask exists further about each [these] subtask and reference of a subtask are performed (Steps S303 and S304). Thus, the structure of a task is investigated one by one towards a low rank side from a high order side, and the task which does not have a subtask in a low rank, i.e., each subtask located in a least-significant layer, connects, and it is chosen as a target task and a document is connected to it (Step S305).

[0044] In addition, since the fault by it is not produced even if it connects a document to a task without substance of procedure, when the "originating task" of drawing 9 is specified by the user as an addition place of a document, you may connect a document to all those lower layer tasks 1, i.e., "subtasks", "a subtask 2", "a subtask 3", the "grandchild task 1", and the "grandchild task 2", for example. An important point is connecting automatically the document connected to the originating task also to the subtask of the lower layer, can bundle up document overhead operation by this, and can perform it.

[0045] Next, at Step S204 of drawing 8 , the result of connecting on each selected task and the selected document is reflected in a server. Here, the connection relation information which shows the combination of Task ID and Document ID which were tied up is generated by the workflow client software 121, and it connects to the workflow management server software 111, and is sent workflow management server software 111 as a renewal demand of a relation. The task Management Department 201 of the workflow management server software 111 updates the flow definition information which corresponds according to the connection relation information included in the updating demand.

[0046] Then, in a client side, the content of an addition place task list window is updated, and the result of a document addition is reflected on an addition place task list window (Step S205).

[0047] As mentioned above, in the workflow managerial system of this operation gestalt, connecting work with a task and a document can be efficiently done by GUI operation using the document add-operation screen including two windows called a task list window and an addition place document list window. Moreover, in an addition place document list window, since not only a task list but the relation of connection to the hierarchical relationship of a task, each task, and a document is displayed simultaneously, a user is one chart and can check the information about two or more things at once.

[0048] Furthermore, since it is made to reflect the connection state of the document to a task also in the subtask by using the property of succession of an object-oriented model, connecting work with each task and a document can be put in block, and can be performed.

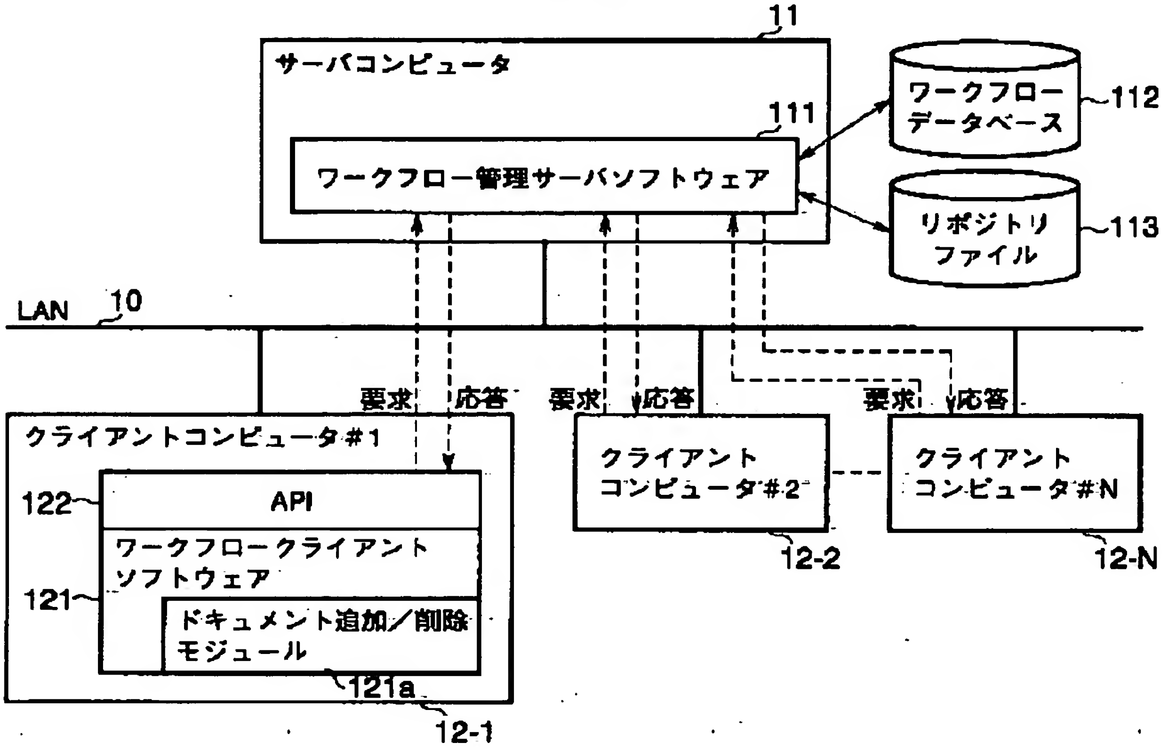
[0049] In addition, the workflow client software 121 and the work low management server software 111 of it recording independently on record media, such as CD-ROM, together, respectively, and being able to distribute are natural.

[0050]

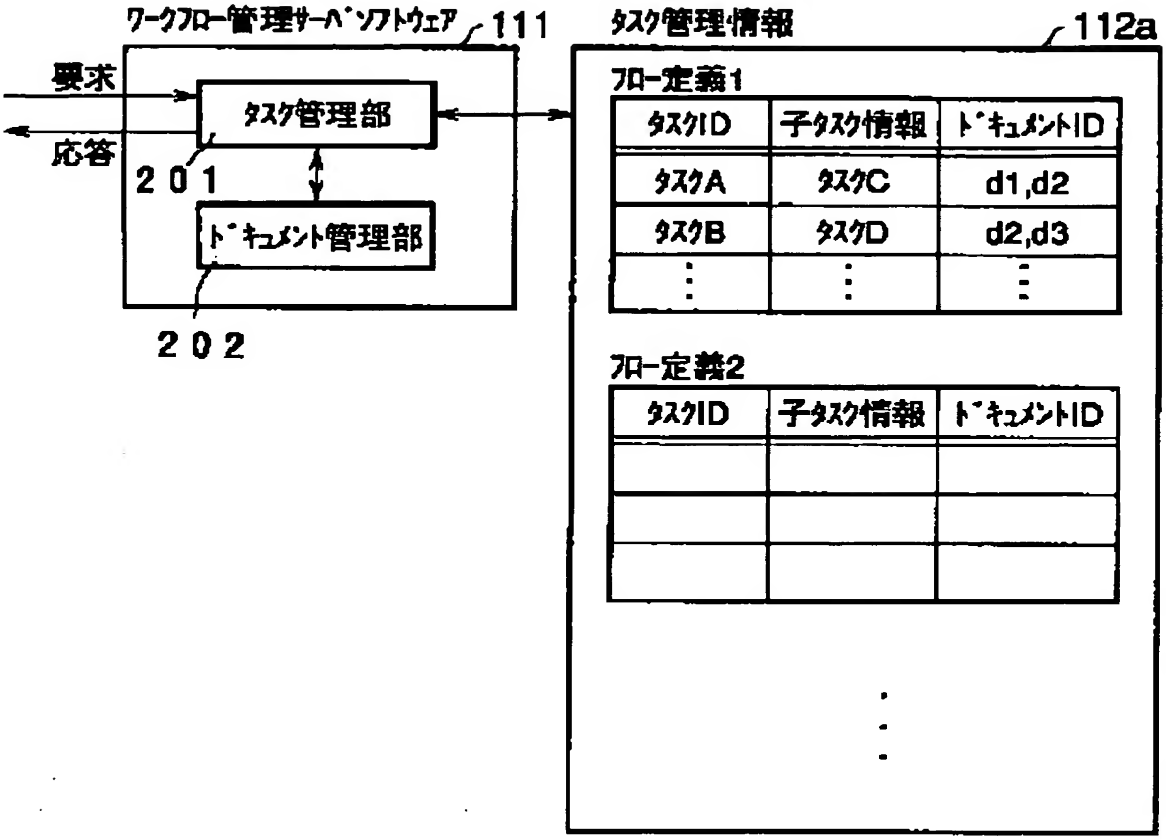
[Effect of the Invention] As explained above, according to this invention, it becomes possible to perform efficiently document overhead operation, such as connecting work and a check of a connection state, by the client side by using the graphical user interface (GUI) for carrying out overhead operation of the connection with the task used as the unit of workflow work, and the document which is a work object.

DRAWINGS

[Drawing 1]


11
サーバコンピュータ
111
ワークフロー管理サーバソフトウェア
ワークフローデータベース
112
リポジトリファイル
113
LAN
10
要求
応答
要求
応答
要求
応答
クライアントコンピュータ#1
122
API
ワークフロークライアントソフトウェア
121
ドキュメント追加／削除モジュール
121a
12-1
クライアントコンピュータ#2
12-2
クライアントコンピュータ#N
12-N

[Drawing 2]

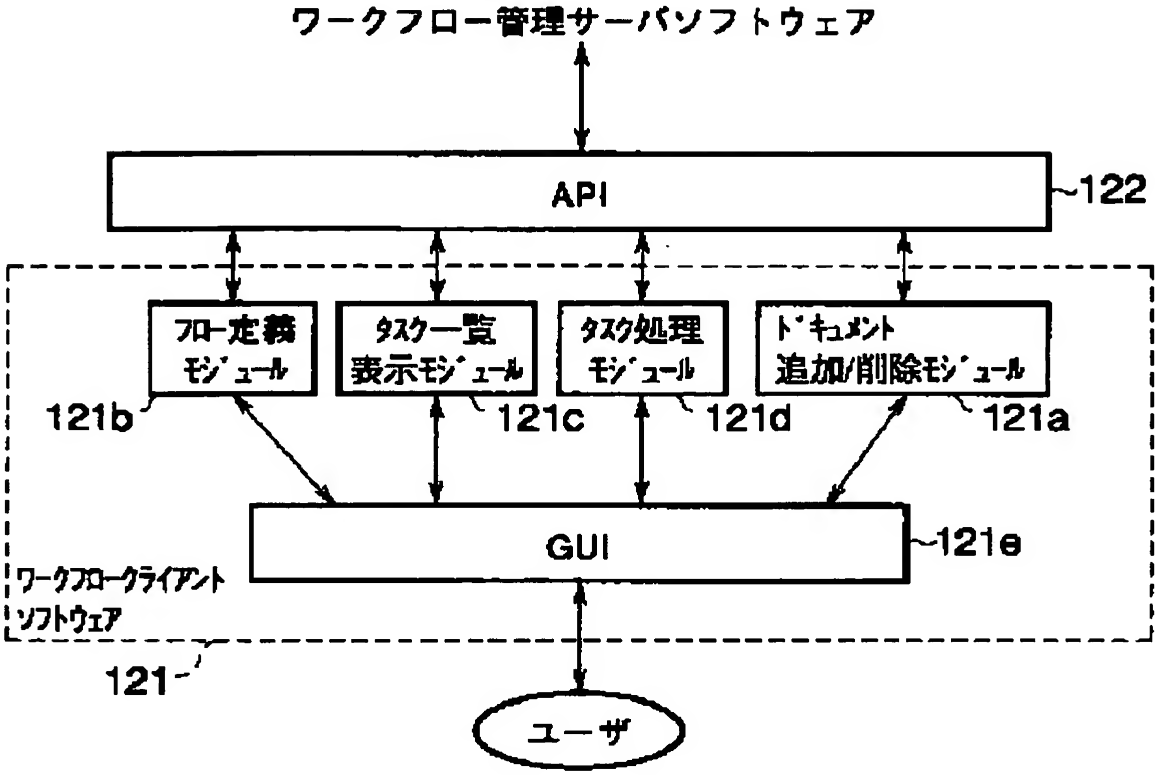

ﾜｰｸﾌﾛｰ管理ｻｰﾊﾞｿﾌﾄｳｪｱ
111
要求
応答
ﾀｽｸ管理部
201
ﾄﾞｷｭﾒﾝﾄ管理部
202
ﾀｽｸ管理情報
112a
ﾌﾛｰ定義1
ﾌﾛｰ定義2

ﾀｽｸID	子ﾀｽｸ情報	ﾄﾞｷｭﾒﾝﾄID
ﾀｽｸA	ﾀｽｸC	d1,d2
ﾀｽｸB	ﾀｽｸD	d2,d3
⋮	⋮	⋮

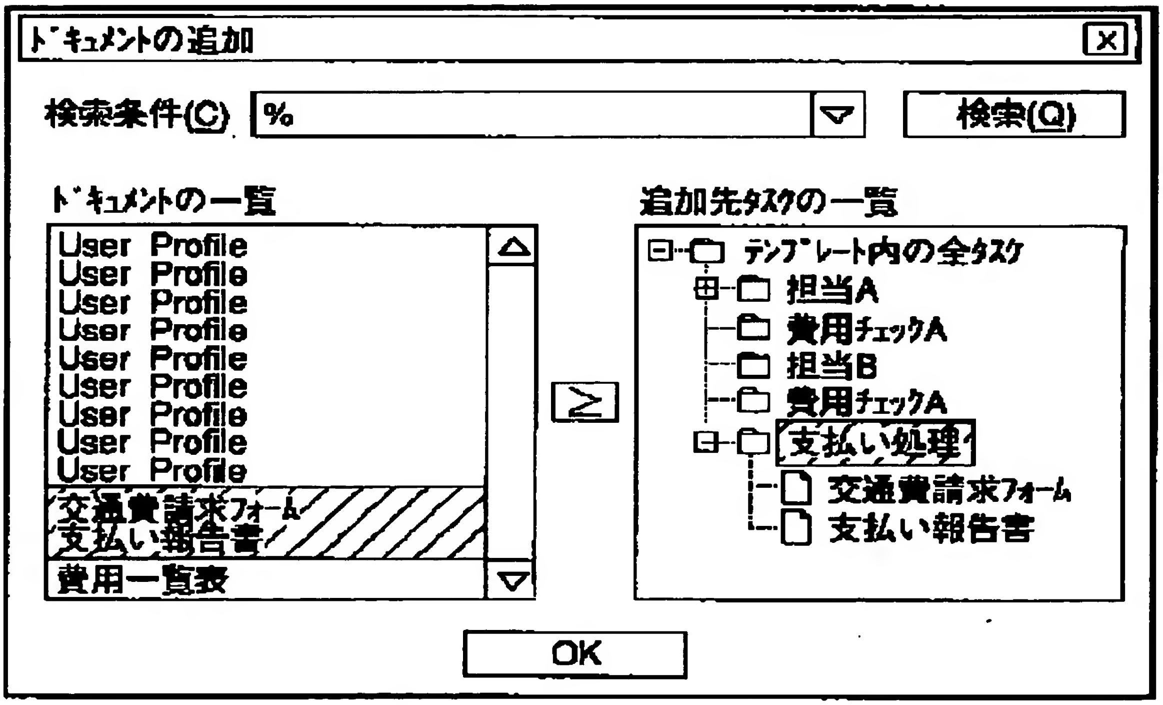
ﾀｽｸID	子ﾀｽｸ情報	ﾄﾞｷｭﾒﾝﾄID

⋮

[Drawing 3]


ワークフロー管理サーバソフトウェア
API
122
ﾌﾛｰ定義ﾓｼﾞｭｰﾙ
ﾀｽｸ一覧表示ﾓｼﾞｭｰﾙ
ﾀｽｸ処理ﾓｼﾞｭｰﾙ
ﾄﾞｷｭﾒﾝﾄ追加/削除ﾓｼﾞｭｰﾙ
121b
121c
121d
121a
GUI
121e
ﾜｰｸﾌﾛｰｸﾗｲｱﾝﾄｿﾌﾄｳｪｱ
121
ユーザ

[Drawing 5]


ﾄﾞｷｭﾒﾝﾄの追加

検索条件(C) %

検索(Q)

ﾄﾞｷｭﾒﾝﾄの一覧

User Profile
User Profile
User Profile
User Profile
User Profile
User Profile
User Profile
User Profile
User Profile
交通費請求ﾌｫｰﾑ
支払い報告書
費用一覧表

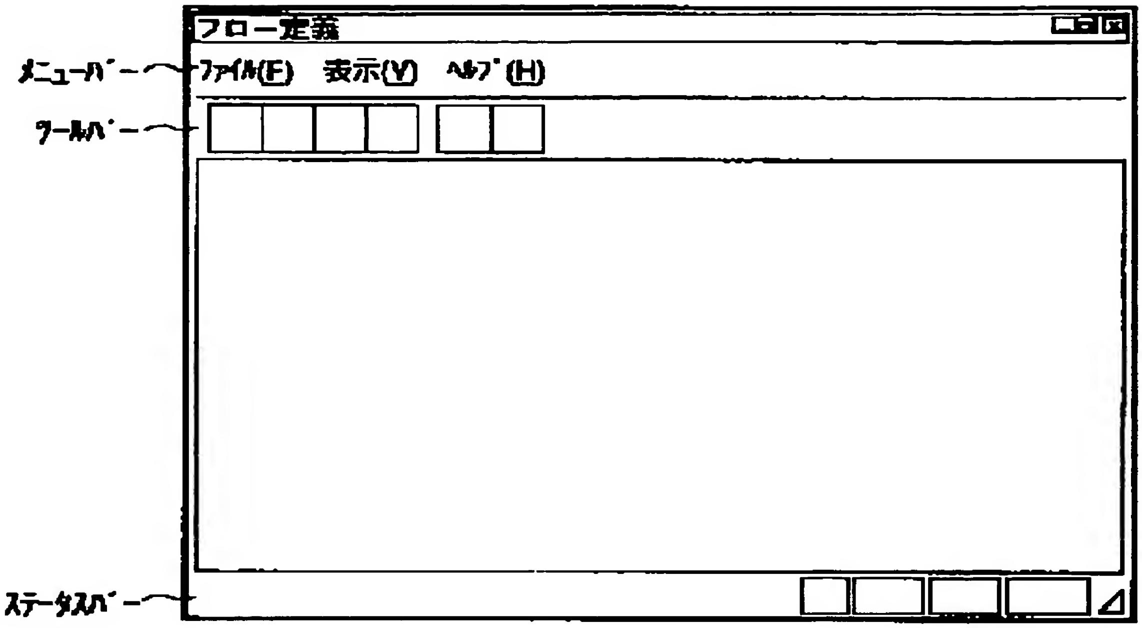
≧

追加先ﾀｽｸの一覧

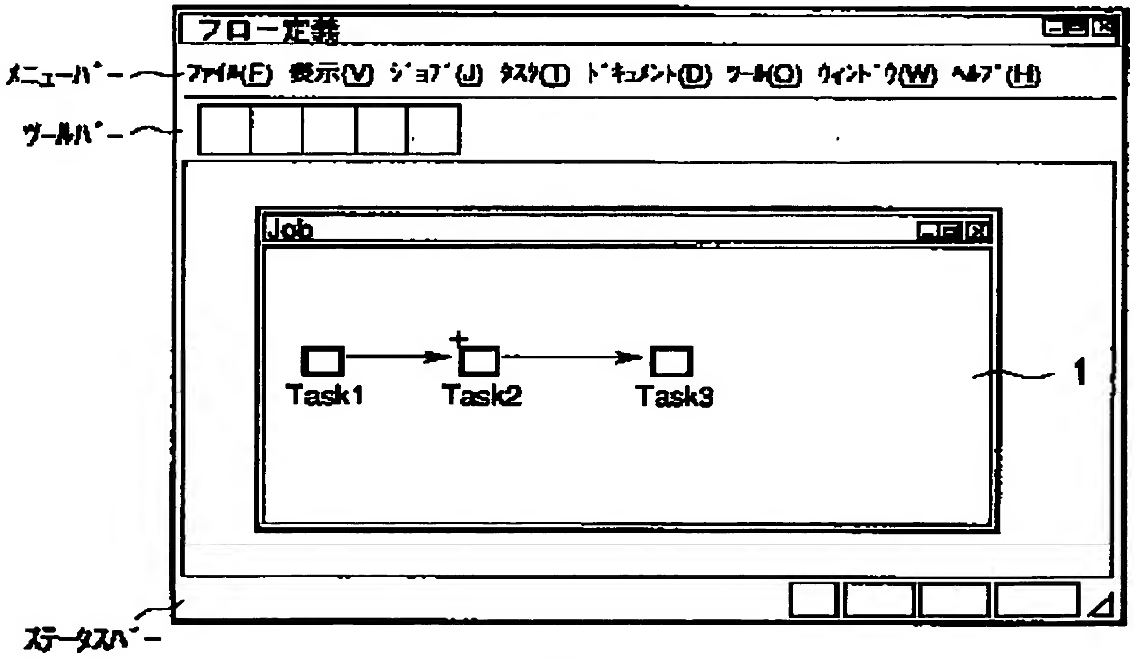
ﾃﾝﾌﾟﾚｰﾄ内の全ﾀｽｸ
  担当A
  費用ﾁｪｯｸA
  担当B
  費用ﾁｪｯｸA
  支払い処理
    交通費請求ﾌｫｰﾑ
    支払い報告書

OK

[Drawing 4]

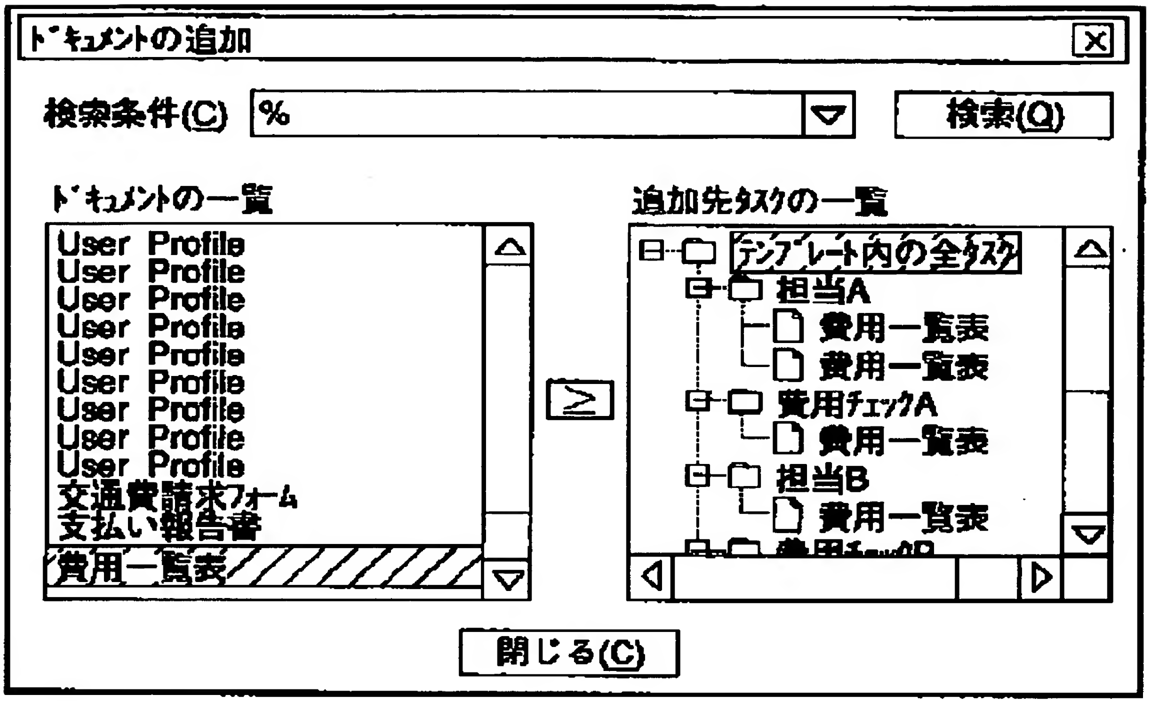

フロー定義
ﾒﾆｭｰﾊﾞｰ
ﾌｧｲﾙ(F)
表示(V)
ﾍﾙﾌﾟ(H)
ﾂｰﾙﾊﾞｰ
ｽﾃｰﾀｽﾊﾞｰ

(a)


フロー定義
ﾒﾆｭｰﾊﾞｰ
ﾌｧｲﾙ(F)
表示(V)
ｼﾞｮﾌﾞ(J)
ﾀｽｸ(T)
ﾄﾞｷｭﾒﾝﾄ(D)
ﾂｰﾙ(O)
ｳｨﾝﾄﾞｳ(W)
ﾍﾙﾌﾟ(H)
ﾂｰﾙﾊﾞｰ
Job
Task1
Task2
Task3
1
ｽﾃｰﾀｽﾊﾞｰ

(b)

[Drawing 6]


ﾄﾞｷｭﾒﾝﾄの追加
検索(Q)
≥
閉じる(C)

検索条件(C) %

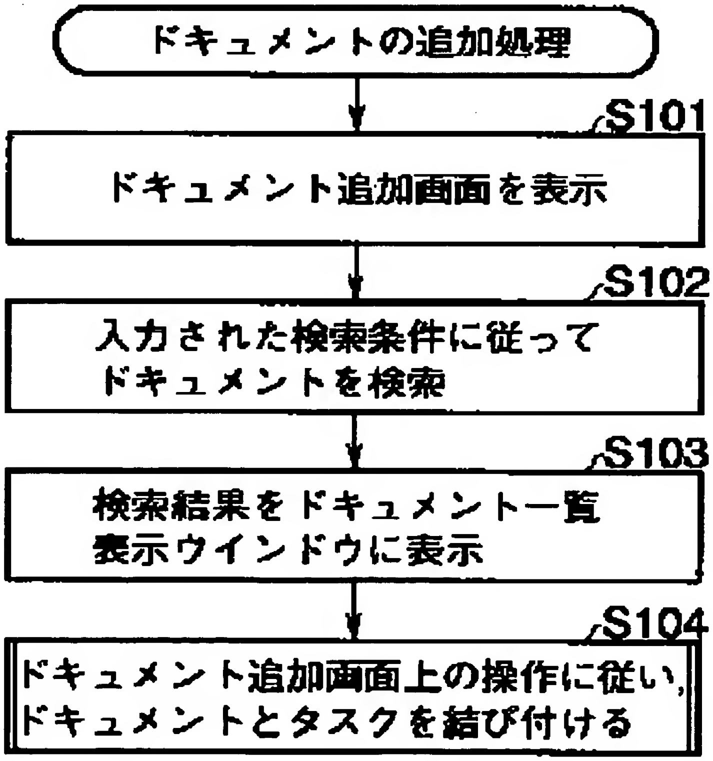
ﾄﾞｷｭﾒﾝﾄの一覧

User Profile
User Profile
User Profile
User Profile
User Profile
User Profile
User Profile
User Profile
User Profile
交通費請求ﾌｫｰﾑ
支払い報告書
費用一覧表

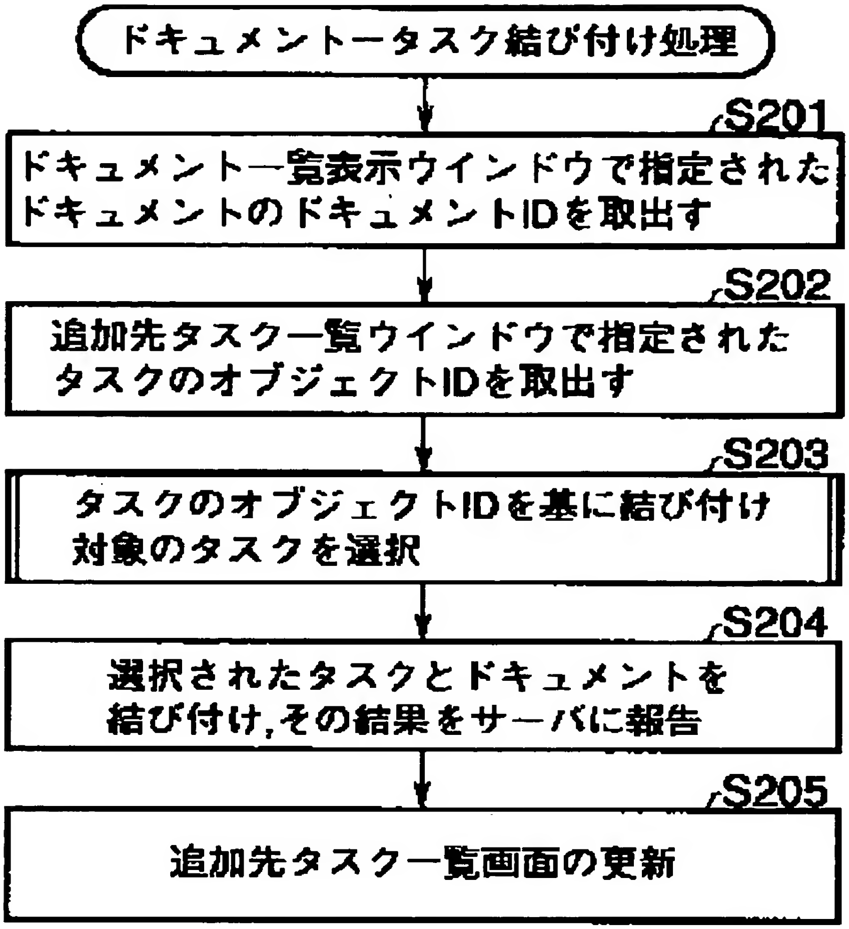
追加先ﾀｽｸの一覧

- ﾃﾝﾌﾟﾚｰﾄ内の全ﾀｽｸ
  - 担当A
    - 費用一覧表
    - 費用一覧表
  - 費用ﾁｪｯｸA
    - 費用一覧表
  - 担当B
    - 費用一覧表

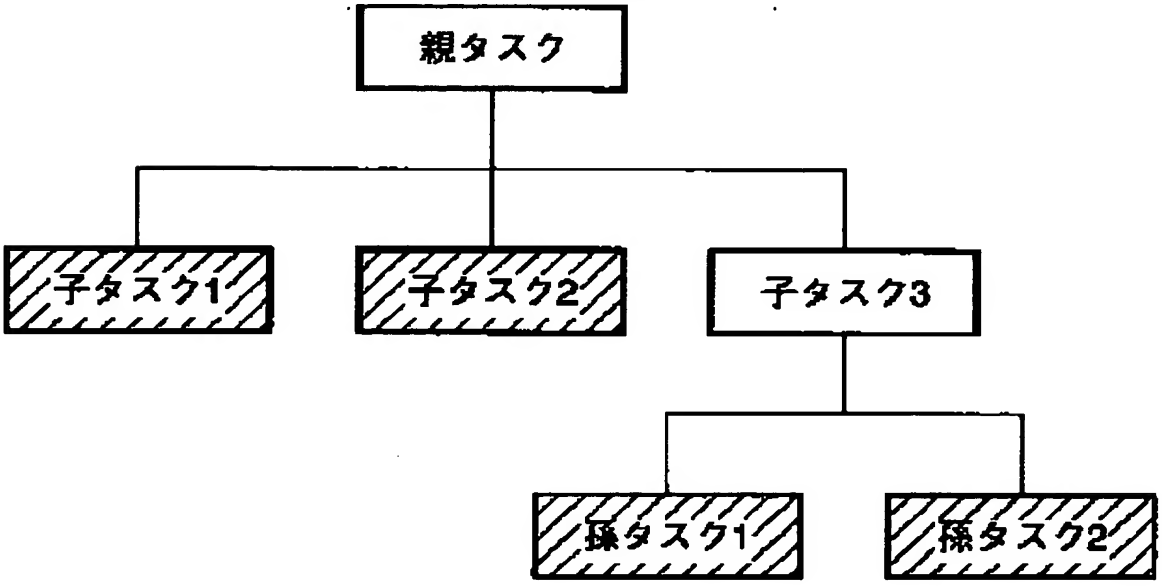
[Drawing 7]


ドキュメントの追加処理
S101
ドキュメント追加画面を表示
S102
入力された検索条件に従って
ドキュメントを検索
S103
検索結果をドキュメント一覧
表示ウインドウに表示
S104
ドキュメント追加画面上の操作に従い,
ドキュメントとタスクを結び付ける

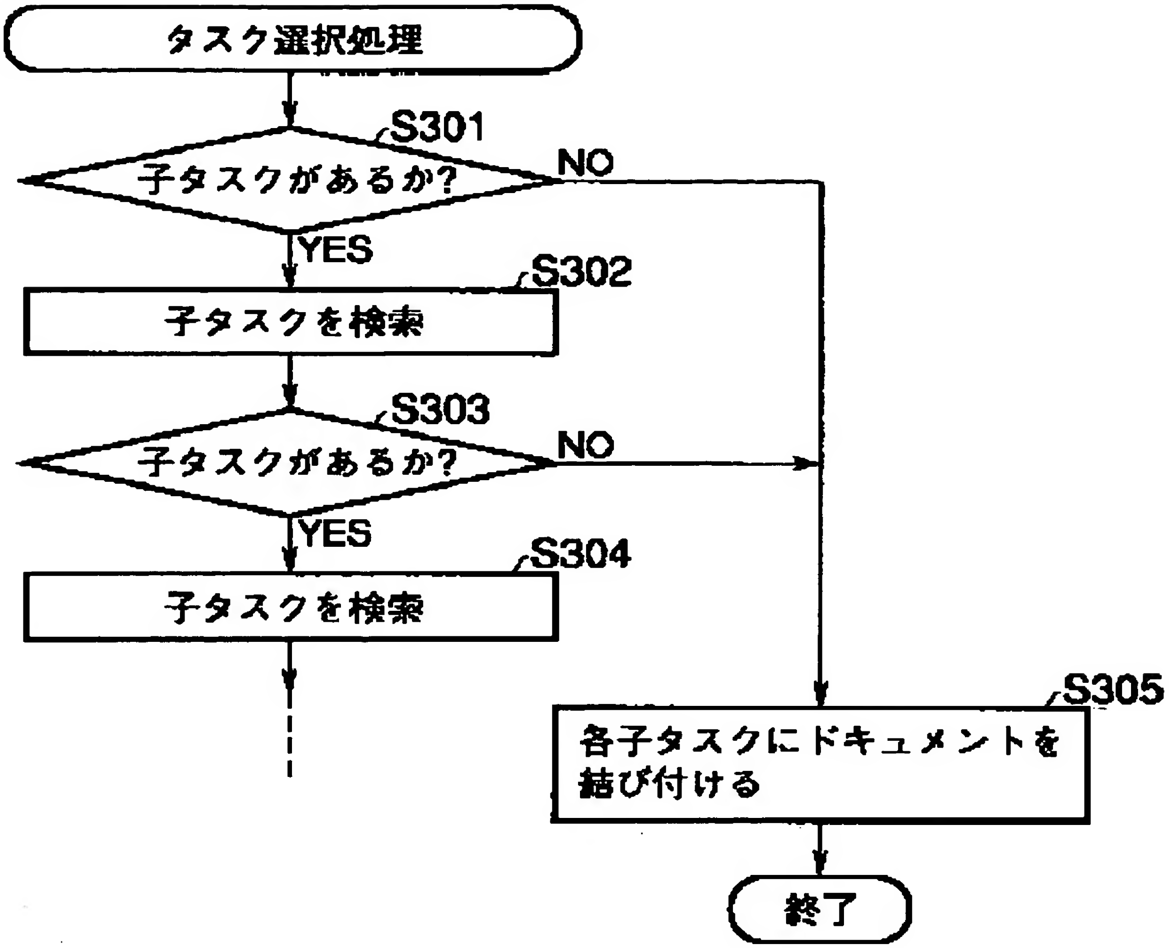
[Drawing 8]


ドキュメント－タスク結び付け処理
S201
ドキュメント一覧表示ウインドウで指定されたドキュメントのドキュメントIDを取出す
S202
追加先タスク一覧ウインドウで指定されたタスクのオブジェクトIDを取出す
S203
タスクのオブジェクトIDを基に結び付け対象のタスクを選択
S204
選択されたタスクとドキュメントを結び付け,その結果をサーバに報告
S205
追加先タスク一覧画面の更新

[Drawing 9]


親タスク
子タスク1
子タスク2
子タスク3
孫タスク1
孫タスク2

[Drawing 10]


タスク選択処理
S301
子タスクがあるか?
NO
YES
S302
子タスクを検索
S303
子タスクがあるか?
NO
YES
S304
子タスクを検索
S305
各子タスクにドキュメントを結び付ける
終了

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] The block diagram showing the composition of the client-server type workflow managerial system concerning 1 operation gestalt of this invention.

[Drawing 2] The block diagram showing the functional composition of the server used by the system of drawing 1 .

[Drawing 3] The block diagram showing the functional composition of each client used by the system of drawing 1 .

[Drawing 4] Drawing showing an example of the flow definition screen displayed on each client of the system of drawing 1 .

[Drawing 5] Drawing showing an example of the document add-operation screen displayed on each client of the system of drawing 1 .

[Drawing 6] Drawing showing the situation of the connecting processing performed on the document add-operation screen of drawing 5 .

[Drawing 7] The flow chart which shows the procedure of the document addition processing performed by each client of the system of drawing 1 .

[Drawing 8] The flow chart which shows the procedure of the document-task connecting processing performed by document addition [of drawing 7] being under processing.

[Drawing 9] Drawing showing an example of the layered structure of a task used by the system of drawing 1 .

[Drawing 10] The flow chart which shows the procedure of the task selection processing performed by drawing 8's document-task connecting being under processing.

[Description of Notations]

10 -- LAN
11 -- Server computer
12-1, 12-2, 12-N -- Client computer
111 -- Workflow management server software
112 -- Workflow database
112a -- Task management information
113 -- RIPOJITO refile
121 -- Workflow client software
121a -- Document addition / deletion module
121b -- Flow definition module
121c ---Task list display module
121d -- Task processing module
121 e--GUI
122 -- API
201 -- Task Management Department
202 -- Document Management Department